IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants	: Horn et al.
Serial No.	: To be assigned
Filed	: June 29, 2001
For	: INDUSTRIAL CONTROLLER BASED ON DISTRIBUTABLE TECHNOLOGY OBJECTS
Examiner	: To be assigned
Group Art Unit	: To be assigned

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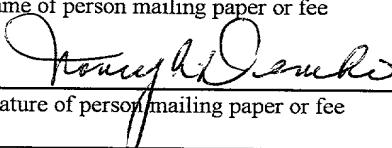
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PRELIMINARY AMENDMENT

Sir:

Preliminary to examination on the merits, please amend the application as follows:

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IN THE SPECIFICATION:

On page 1, before paragraph [0001], insert: --Field of the Invention--.

On page 1, before paragraph [0003], insert: --Background--.

On page 2, before paragraph [0007], insert: --Summary of the Invention--.

On page 9, before paragraph [0032], insert: --Brief Description of the Figures--.

On page 10, before paragraph [0033], insert: --Detailed Description of the Invention--.

IN THE CLAIMS:

Cancel claims 1-15 without prejudice.

Add new claims 16-32.

16. (New) An industrial controller comprising a plurality of devices, for use in controlling a system including a plurality of components, the controller comprising:

a) control means independent of the controlled components; and

b) component control means relating to the controlled components for supplementing the control means, the component control means implemented using a plurality of technology objects corresponding to the components, the technology objects distributable on the devices.

17. (New) An industrial controller according to claim 16, further comprising automatically generated communications links between at least two of the technology objects.

18. (New) An industrial controller according to claim 16, wherein technology objects comprise attributes taken into account in the generation of the communications links.

19. (New) An industrial controller according to claim 16, wherein technology objects are distributable on a plurality of devices within a project, the project relating to plurality of control units.

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20. (New) An industrial controller according to claim 16, wherein the functionality of the technology objects is distributed among control units in equidistant communication with one another in real time with clock synchronization.

21. (New) An industrial controller according to claim 16, wherein the technology object types permit technological scaling of the functionality of the controller.

22. (New) An industrial controller according to claim 16, wherein technology objects are interleaved to form container objects.

23. (New) An industrial controller according to claim 16, further adapted to provide a plurality of views of the technology objects to a user.

24. (New) An industrial controller according to claim 16, further adapted for feedback-free programming of a technology object with respect to the other technology objects and the control means.

25. (New) An industrial controller according to claim 16, wherein technology objects are represented in the engineering system by graphical elements.

26. (New) An industrial controller according to claim 16, wherein the technology objects have types and the technology object types are clustered into one or more technology packages.

27. (New) A method of programming an industrial control system comprising a plurality of devices, the controller being programmed for one or more projects and comprising a plurality of technology objects, the method comprising the steps of:

a) providing a technology-neutral control system;

b) interleaving of the technology objects to form a set of complex technology objects,

c) distributing a plurality of the technology objects on a plurality of the devices; and

d) reusing at least one of the complex technology objects in a second project.

28. (New) A method according to claim 28, wherein attributes of the technology objects are taken into account in generating the communication channels.

29. (New) A method of programming an industrial control system comprising a plurality of devices, the controller being programmed for one or more projects and comprising a plurality of technology objects, the method comprising the steps of:

a) providing a technology-neutral control system;

b) instantiating the technology objects;

c) interleaving the technology objects to form a set of complex technology objects for a first project;

d) distributing the technology objects on a plurality of the devices;

e) generating communication channels between the technology objects; and

f) reusing at least one of the complex technology objects in a second project.

30. (New) A method for programming an industrial controller for a technical process, the method comprising the steps of:

a) selecting a plurality of technology objects relevant to a desired application;

b) interleaving the selected technology objects to form technology objects having complex functionality; and

c) distributing the interleaved technology objects onto a device.

31. (New) The method of claim 30, wherein interleaved technology objects may be re-used in a subsequent application of the method.

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32. (New) A system for programming an industrial controller, comprising:

a) an industrial control system;

b) means for selecting a plurality of technology objects relevant to a desired application;

c) means for interleaving the selected technology objects to form technology objects having complex functionality; and

d) means for distributing the interleaved technology objects onto a plurality of devices.

REMARKS

Upon entry of this Preliminary Amendment, claims 16-32 are pending. Support for new claims 16-32 is provided in the specification, including the originally filed claims. No new matter has been added.

This Amendment is voluntary and made for the purpose of more distinctly pointing out and claiming the subject matter of the invention. The Amendment is not made for purposes of patentability, nor does it narrow the scope of what is claimed.

Authorization is given to charge Deposit Account No. 19-2179 for any fee due in connection with this communication.

Dated: _June 29, 01_

Respectfully submitted,
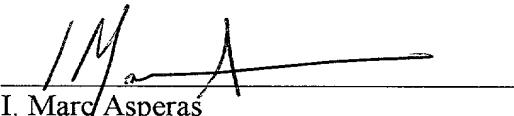
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